

## CHEMICALLY MODIFIED ENZYMES WITH MULTIPLE CHARGED VARIANTS

### ABSTRACT OF THE DISCLOSURE

This invention provides modified enzymes comprising one or more amino  
5 acid residues replaced by cysteine residues, where the cysteine residues are modified by  
replacing the thiol hydrogen in the cysteine residues with a substituent group providing a  
thiol side chain comprising a multiply charged moiety. The enzymes show improved  
interaction and/or specificity and/or activity with charged substrates.

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